

PRESS RELEASE

Bursts of high-intensity exercise could help diabetes patients manage low blood sugar levels

People with type-1 diabetes could regain their ability to tell when blood sugar levels are low by regularly doing short bursts of high-intensity exercise, according to a preliminary study presented today at the [Society for Endocrinology annual conference](#). The findings could lead to a non-drug based treatment for a potentially life-threatening condition.

A quarter of people with type-1 diabetes eventually lose the ability to recognise when their blood sugar (glucose) levels are low (hypoglycaemia); this is a condition known as hypoglycaemia unawareness. When a person with Type-1 diabetes cannot respond quickly to hypoglycaemia they are in danger of losing consciousness or falling into a coma.

Scientists at the University of Dundee studied rats that had been exposed to repeated hypoglycaemic conditions over a period of 4 weeks. The rats were split into three groups, each of which was made to either i) exercise at low intensity, ii) exercise at high intensity or iii) do no exercise at all. 24 hours after exercising the rats were tested for their response to low blood sugar levels. The scientists found that rats exposed to high intensity exercise had the fastest and most effective response to the hypoglycaemia.

“Hypoglycaemic episodes are an unavoidable part of life for those living with type-1 diabetes”, said lead author of the study Alison McNeilly. “After a few years some people with type-1 diabetes might not even know they are suffering from one of these episodes and this puts them at high risk of severe hypos.”

While there are no treatments available for the management of hypoglycaemia unawareness, our breakthrough could represent a non-drug based treatment for this seriously debilitating and potentially deadly condition.”

McNeilly and her colleagues at the University of Dundee are currently setting up a clinical trial to test this work in type-1 diabetes patients.

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Notes for editors

1. The study *Acute intense exercise restores defective counter-regulation in type 1 diabetes through a process of dis-habituation* will be presented by Dr Alison McNeilly at the Society for Endocrinology's annual conference at 16.15 GMT, room OC4.1 on Tuesday 3 November 2015. Please note this is a conference abstract, and this study has not yet been published in a peer-reviewed journal.
2. For press enquiries, please contact the Society for Endocrinology press office:

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3. The Society for Endocrinology's annual conference is held at the Edinburgh International Conference Centre from 2-4 November 2015. The conference features some of the world's leading basic and clinical endocrinologists who present their work. Journalists wishing to attend should contact the Society for Endocrinology press office using the details above. The scientific programme is available on the [conference webpage](#).
4. The Society for Endocrinology is a UK-based membership organisation representing a global community of scientists, clinicians and nurses who work with hormones. Together we aim to improve public health by advancing endocrine education and research, and engaging wider audiences with the science of hormones.
www.endocrinology.org